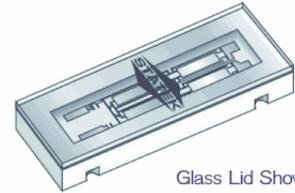


ISSUE 1; January 2016

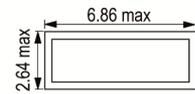
Description

- The CX3V TF quartz crystals are leadless devices designed for surface mounting on printed circuit boards or hybrid substrates. These miniature crystals are intended to be used in Pierce oscillators. They are hermetically sealed in a rugged, miniature ceramic package. They are manufactured using the Statek developed photolithographic process and were designed utilising the experience acquired by producing millions of crystals for industrial, commercial, military and medical applications.
- -C SM1 Gold Plated with ceramic lid
- -C SM4 Solder Plated with ceramic lid
- -C SM5 Solder Dipped with ceramic lid
- -SM1 Gold Plated with glass lid
- -SM4 Solder Plated with glass lid
- -SM5 Solder Dipped with glass lid
- FEATURES:
 - Miniature tuning fork design
 - High shock resistance
 - Low ageing
 - Designed for low power applications
 - Ideal for battery operated applications
 - Compatible with hybrid or PC board packaging
 - Full military testing available
- Please note that all data is only valid at 25°C unless otherwise stated.

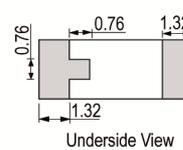
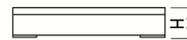


Glass Lid Shown

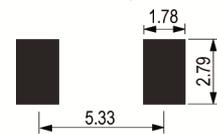
Outline (mm) -SM1 = Gold Plated with glass lid



	Height (H) =	
	Glass Lid	Ceramic Lid
SM1	1.35	1.70
SM2	1.40	1.75
SM3	1.47	1.83
SM4	1.40	1.75
SM5	1.47	1.83



Solder Pad Layout



Frequency Parameters

- Frequency: 18.0kHz to 600.0kHz
- Frequency Tolerance: ±30.00ppm to ±5,000.00ppm
- Tolerance Condition: @ 25°C
- Ageing: ±5ppm max in the 1st year @ 25°C
- Temperature Coefficient (k): -0.035ppm/°C²
- Note: Frequency f at temperature T is related to frequency fo at turning point temperature To by: $(f-f_0)/f_0 = k(T-T_0)^2$

Electrical Parameters

- Load Capacitance (CL): 4.0pF to 10.0pF
- Shunt Capacitance (C0): 1.8pF max
- Drive Level: 18-24.9kHz 0.5µW max, 25-600kHz 1.0µW max

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

Environmental Parameters

- Shock: 1500G peak, 0.3ms, 1/2 sine
- Vibration: 10G rms, 20-2000Hz random
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

- Maximum Process Temperature: 260°C for 20sec max

Sales Office Contact Details:

UK: +44 (0)1460 270200

France: 0800 901 383

Email: info@iqdfrequencyproducts.com

Germany: 0800 1808 443

USA: +1.760.318.2824

Web: www.iqdfrequencyproducts.com

Ordering Information

- Frequency*
- Model*
- Lid Variant*
- Termination Variant*
- Frequency Tolerance (@ 25°C)*
- Operating Temperature Range*
- Load Capacitance
- (*minimum required)
- Lid Variants:
 - Blank = Glass
 - C = Ceramic
- Termination Variants:
 - SM1 = Gold Plated
 - SM4 = Solder Plated
 - SM5 = Solder Dipped
 Note: non-RoHS compliant terminations are available - please contact an IQD Sales Office
- Example
 - 100.0kHz CX3V TF-C SM1
 - 100/-/-40 to 85C/8 FUND

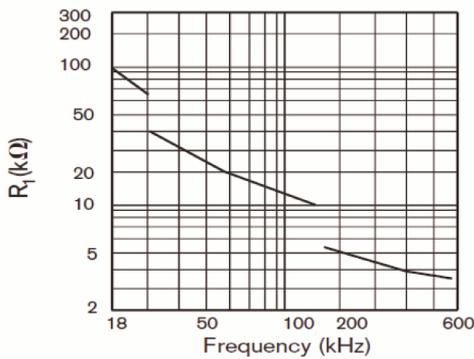
Compliance

- RoHS Status (2011/65/EU) Optional
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

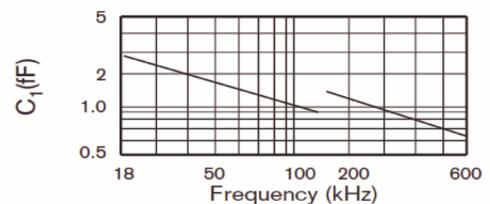
Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: Tray Tray
Pack Size: 1

CX3V TF typical Motional Resistance



CX3V TF typical Motional Capacitance



Sales Office Contact Details:

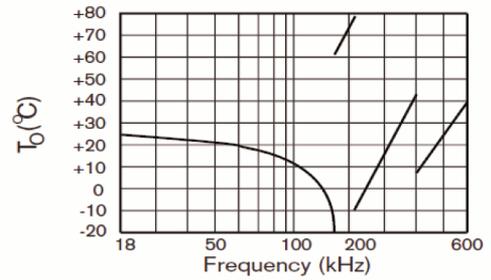
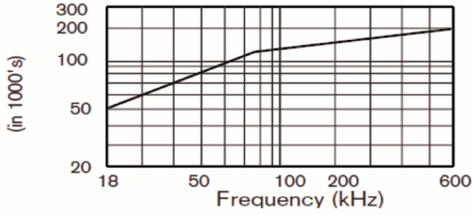
UK: +44 (0)1460 270200
Germany: 0800 1808 443

France: 0800 901 383
USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com

CX3V TF typical Quality Factor

CX3V TF typical Turning Point Temperature



Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
18.000kHz	600.0kHz	-10 to 70		Fundamental	-
		-40 to 85			-
		-55 to 125			-

*Stability Maximum values ±0ppm

This document was correct at the time of printing; please contact your local sales office for the latest version.

[Click to view latest version on our website.](#)

Sales Office Contact Details:

UK: +44 (0)1460 270200

France: 0800 901 383

Email: info@iqdfrequencyproducts.com

Germany: 0800 1808 443

USA: +1.760.318.2824

Web: www.iqdfrequencyproducts.com